WORKPLACE SAFETY AND HEALTH IN WASHINGTON

From The
National Institute for Occupational Safety and Health

State Profile 2002

Delivering on the Nation's promise:
Safety and health at work for all people through prevention.

The National Institute for Occupational Safety and Health

NIOSH is the primary federal agency responsible for conducting research and making recommendations for the prevention of work-related illness and injury. NIOSH is located in the Department of Health and Human Services in the Centers for Disease Control and Prevention. The NIOSH mission is to provide national and world leadership to prevent work-related illness, injury, disability, and death by gathering information, conducting scientific research, and translating the knowledge gained into products and services. As part of its mission, NIOSH supports programs in every state to improve the health and safety of workers. NIOSH has developed this document to highlight recent NIOSH programs important to workers and employers in Washington State.

The Burden of Occupational Illness and Injury in Washington

- In Washington, there are approximately 2.9 million individuals employed in the workforce.[1]
- In 2000, 75 workers died as a result of workplace injuries.[2]
- The construction industry had the highest number of fatalities, followed second by the transportation and public utilities industry, and third by the agriculture, forestry, and fishing industry.[2]
- In 1999, the most recent year for which data are available, the rate of fatal workplace injuries was 3.0 deaths per 100,000 workers–below the national average rate of 4.5 deaths per 100,000 workers.[2]
- In 2000, there were 169,500 nonfatal workplace injuries and illnesses in Washington.[3]

The Cost of Occupational Injury and Illness in Washington

In 2000, the most recent year for which data are available, a total of $1.5 billion was paid for workers' compensation claims by Washington private insurers, self-insured employers, and state funds.[4] This figure does not include compensation paid to workers employed by the federal government and also underestimates the total financial burden for private sector businesses, since only a fraction of health care costs and earnings lost through work injuries and illnesses is covered by workers' compensation. Chronic occupational illnesses like cancer are substantially under-reported in workers' compensation systems because work-relatedness is often difficult to establish.

How NIOSH Prevents Worker Injuries and Diseases in Washington

Health Hazard Evaluations (HHEs) and Technical Assistance

NIOSH evaluates workplace hazards and recommends solutions when requested by employers, workers, or state or federal agencies. Since 1993, NIOSH has responded to 43 requests for HHEs in Washington in a variety of industrial settings, including the following example:

Cheney, Washington: Exposure to Chainsaw Exhaust Among Foresters
In 1999-2000 NIOSH responded to an HHE by management at Turnbull National Wildlife Refuge in Cheney, Washington, to assess exposure to chainsaw emissions among foresters thinning pine trees. Investigators concluded that exposure to carbon monoxide (CO) and carboxyhemoglobin levels in foresters exceeded the limits recommended by NIOSH. In addition, there was airborne exposure to low levels of three potential occupational carcinogens. The foresters also reported recurring musculoskeletal symptoms, such as soreness of the fingers, wrists, elbows, and back. Recommendations to management included: reducing exposure to chainsaw exhaust and musculoskeletal strains by replacing some of the sawyer work with other duties during a worker's shift; training new employees in proper felling techniques; and enforcing the U.S. Occupational Safety and Health Administration's safety procedures applicable to the felling of large trees. Recommendations to employees included keeping chainsaws sharp to reduce the duration of peak CO exposure and following proper safety procedures when felling large trees.

Fatality Assessment and Control Evaluation (FACE) Investigations

NIOSH developed the FACE program to identify work situations with a high risk of fatality and to formulate and disseminate prevention strategies. In Washington, FACE is conducted by the state's Department of Labor and Industries under a cooperative agreement with NIOSH. Since 1995, there have been eight FACE investigations in Washington.

Washington: Flagger Killed During Road Construction
On October 18, 1999, a 45-year-old female flagger died after being struck by a dump truck. The flagger, part of a crew paving a residential street, was controlling traffic at a side street feeding the street being paved. A dump truck struck her as it was backing up to drop its load of asphalt into a paver. FACE investigators recommended equipping flaggers with two-way portable radio communication devices. Recommendations to employers included: having a process for identifying, controlling, and communicating hazards in work zones; using spotters to direct trucks and heavy equipment backing up in work zones; and ensuring that mirrors or other devices cover "blind spots" for dump truck drivers.

Building State Capacity

Spokane Research Laboratory (SRL)
In 1996, mine safety and health research functions within the Bureau of Mines were officially transferred to the NIOSH Office for Mine Safety and Health Research. The Laboratory, located in Spokane, operates with a staff of 94 employees. Ongoing work at SRL includes research on catastrophic failure detection and prevention, mining injury and disease prevention, and surveillance of mining injuries and deaths, with particular emphasis on trends in the Western states.

The Adult Blood Lead Epidemiology and Surveillance Program (ABLES)
NIOSH funds ABLES in the Washington State Department of Labor and Industries. Through ABLES, the agency's staff track and respond to cases of excessive lead exposure in adults which can cause a variety of adverse health outcomes such as kidney or nervous system damage and potential infertility. From May 1993 to December 2000, 29,000 workers were tested. Results showed that four percent had blood lead concentrations higher than 25 mcg/dL. Educational materials were sent to all these workers.

The Pacific Northwest Agricultural Safety and Health Center
This Center, one of ten NIOSH Centers for Agricultural Disease and Injury Research, Education, and Prevention nationwide, is based at the Department of Environmental Health at the University of Washington. The Center's research, intervention, education, outreach, and evaluation programs focus on preventing occupational disease and injury among workers in the farming, fishing, and forestry industry in Alaska, Idaho, Oregon, and Washington.

The Northwest Center for Occupational Health and Safety
This Education and Research Center (ERC), one of 16 NIOSH ERCs nationwide, is based at the Department of Environmental Health at the University of Washington. The ERC provides graduate academic and research programs in industrial hygiene, occupational medicine, occupational health nursing, and occupational safety. Continuing education and hazardous substance training also are offered. In fiscal year 2000, 48 students were enrolled and 20 were graduated. Twenty-one continuing education courses were offered to 954 practicipants.

Extramural Programs Funded by NIOSH

The following are examples of recent research contracts, research grants, training grants, or cooperative agreements funded by NIOSH in the state of Washington.

Improving Data Quality in Pesticide Illness Surveillance
Washington State has required investigation of all reported suspected pesticide-related illnesses since 1970. Several effective interventions have been initiated based on these data. NIOSH currently funds a project by the state's Department of Health aimed at increasing the value of the information generated by the pesticide illness surveillance system in order to formulate more effective interventions to protect workers in the state.

Peak Exposures in Aluminum Smelting
Workers operating aluminum smelting "potrooms" are at increased risk of asthma and other respiratory conditions attributed to the acid gases, hydrogen fluoride (HF), and sulfur dioxide (SO_2) which are released during smelting operations, producing high transient peaks of exposure. Peak exposures to particulate (including alumina, cryolite, and aluminum fluoride) also occur during these operations and may affect the observed pulmonary effects. With support from NIOSH, the Department of Environmental Health at the University of Washington will adapt real-time instruments for monitoring HF, SO_2, and non-specific particulate by integrating currently available electrochemical sensor and light scattering technology. Exposure in four aluminum smelting operations will be monitored and characterized within specific job tasks. Distribution of these exposures will be modeled as a function of smelter technology, location, and work task in order to help design effective interventions.

Additional information regarding NIOSH services and activities can be accessed through the NIOSH home page at http://www.cdc.gov/niosh/homepage.html or by calling the NIOSH 800-number at 1-800-356-NIOSH (1-800-356-4674).

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[1]U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics, Current Population Survey, 2000.

[2]DOL, BLS in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1999-2000.

[3]DOL, BLS in cooperation with participating state agencies, Survey of Occupational Injuries and Illnesses, 2000.

[4]National Academy of Social Insurance, *Workers' Compensation: Benefits, Coverage, and Costs, 2000 New Estimates,* May 2002.